

Analysis of the Narrow Band Internet of Things (NB-IoT) Technology

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Abstract

Internet of Things (IoT) has the potential to enable the interconnection of small footprint devices, which can offer valuable information for various critical use cases. It is expected to enable interconnections of participating IoT entities by combining a plethora of technologies and communication networks. Low Power Wide Area Network (LPWAN) IoT connectivity has been evolved to address the massive scale of IoT deployments and other critical requirements in terms of low power, low cost, deep coverage in hard-to-reach areas, and long battery life. Among the various wireless LPWAN technologies, the Narrow Band IoT (NB-IoT) using the existing cellular Long Term Evolution (LTE) network is the front runner. It is getting very popular and starting to be deployed on an exponential scale. As the current IoT market trend leverages on the usage of this evolving technology, it is highly important to critically evaluate, analyse, and assess the NB-IoT technology. It is believed that the work presented in this paper would be an eye-opener that will benefit the researchers who are working in the NB-IoT and IoT technology space.